

Fully-integrated pressure-controlled electrochromic E-skins

Ziyu Yue[‡], Yi Wang[‡], Yuan Lin and Chunyang Jia*

[‡] These authors contributed equally to this work.

*State Key Laboratory of Electronic Thin Films and Integrated Devices, University of Electronic
Science and Technology of China, Chengdu 610054, P. R. China*

**Corresponding author: [Chunyang Jia](#)*

Tel.: +86 28 83201991;

Fax: +86 28 83202569;

Email: cyjia@uestc.edu.cn (C. Y. Jia)

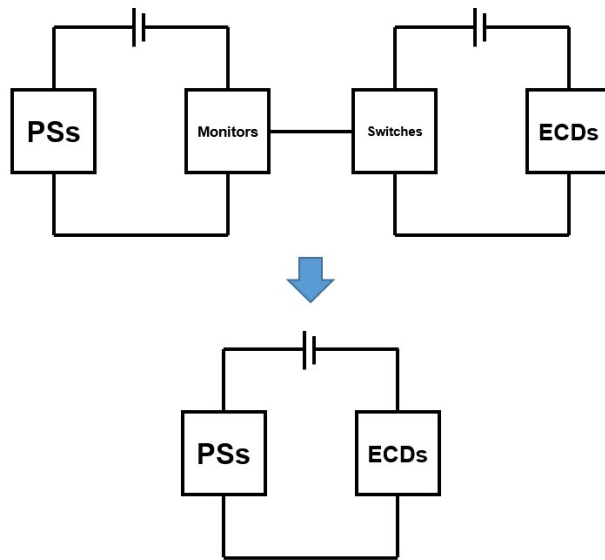


Fig. S1 Schematic of generally tactile ECD controlling logic and PCECD controlling logic.

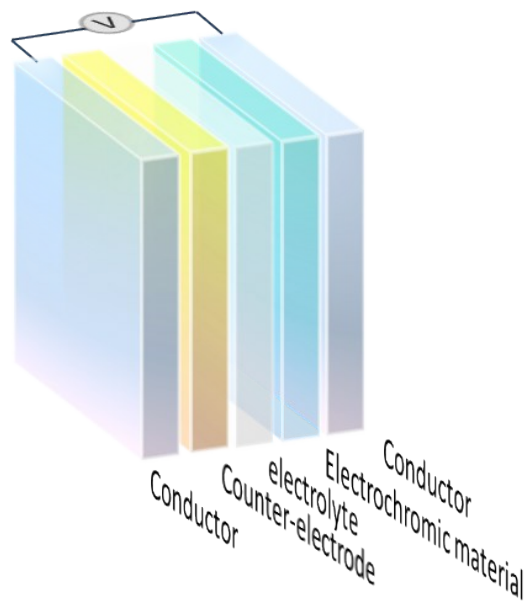


Fig. S2 Schematic of the typical electrochromic device.

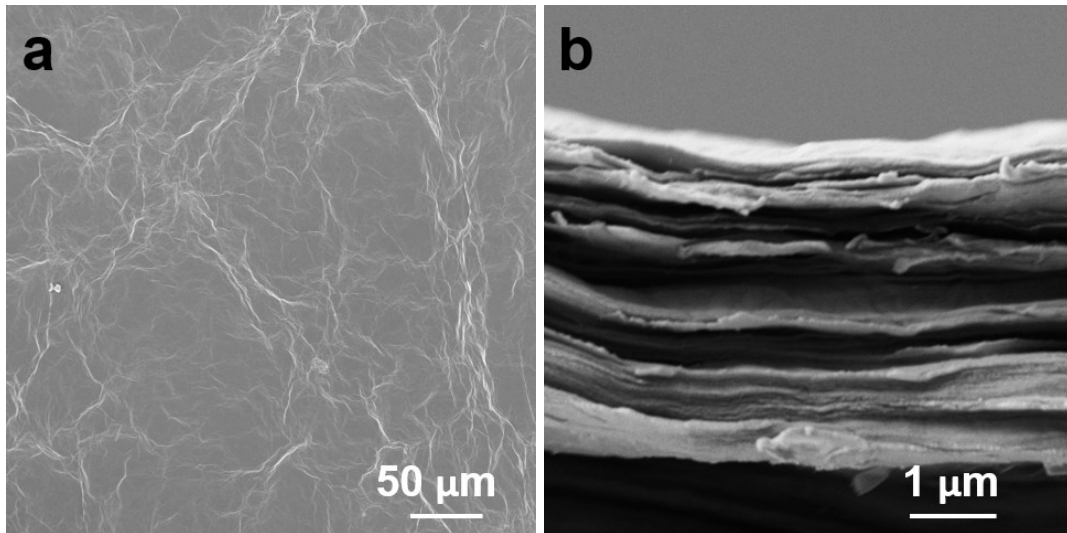


Fig. S3 SEM image of surface (a) and cross-section (b) of GO film.

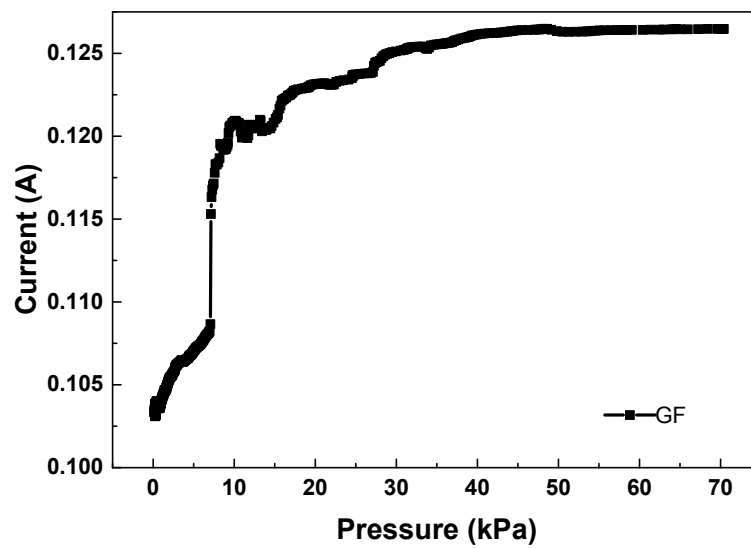


Fig. S4 Current-pressure response of GF.

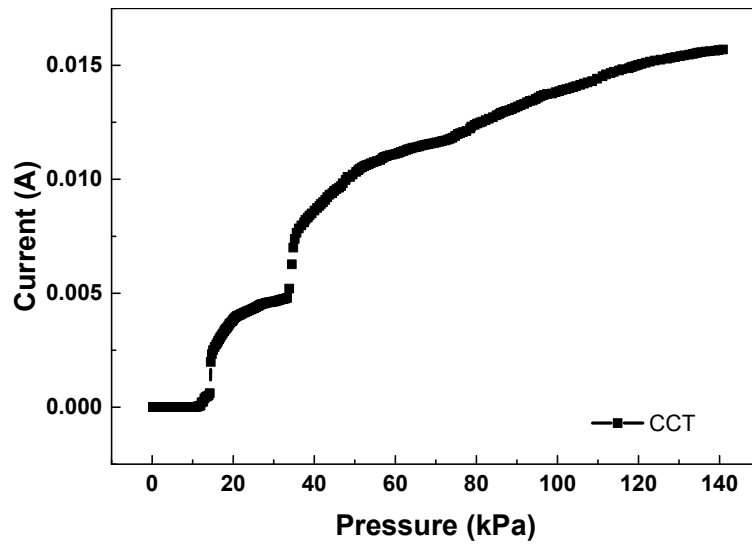


Fig. S5 Current-pressure response of CCT.

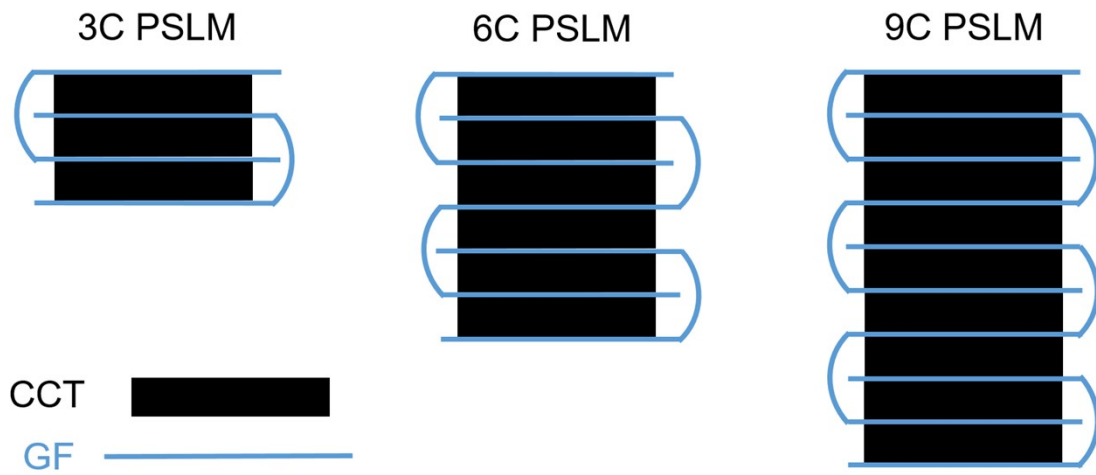


Fig. S6 Cross-section schematic of 3C, 6C and 9C PSLM

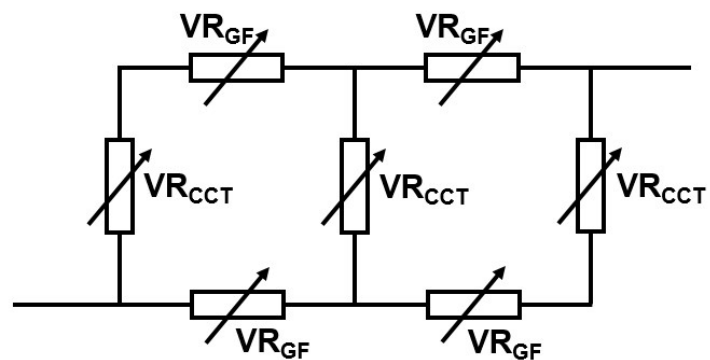


Fig. S7 Equivalent circuit diagram of PSLM.



Fig. S8 Cross-section schematic of the layered structure of PCECD.

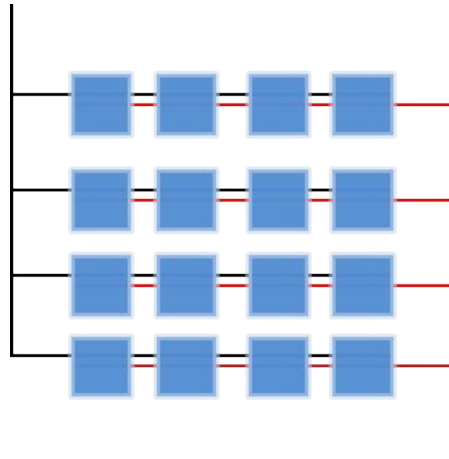


Fig. S9 Schematic of the connection of multi-pixel PCECD array.

Table S1 Four probes measurement results of GF,CCT and Au/Nylon

Sample	Thickness	R_{\square}	σ ($S \cdot m^{-1}$)
GF	4.9 μm	15.39 $\Omega \cdot sq^{-1}$	13261
CCT	0.16 mm	253.6 $k\Omega \cdot sq^{-1}$	0.025
Au/Nylon 66	~ 300 nm	152.2 $m\Omega \cdot sq^{-1}$	2.19×10^7

Table S2 The CIE $L^*a^*b^*$ chromaticity corresponding parameters of the ECD.

ECD	L^*	a^*	b^*
Original	46.59	4.71	32.05
Colored	27.7	-1.06	4.37
Bleached	47.2	7.91	25.75